



BEST AVAILABLE COPY

Delphion **Intellectual Property Network**
To Search & Research

[IPN Home](#) | [Search](#) | [Order](#) | [Shopping Cart](#) | [Login](#) | [Site Map](#) | [Help](#)

 **Order plaques now**

 **JP6157003A2: PRODUCTION OF HYDROGEN UTILIZING IRON**
[View Images \(1 pages\)](#) | [View INPADOC only](#)

Country: JP Japan

IPC Class:

Inventor(s): KOROJI SHOHEI
FUKAGAWA MAKOTO

Applicant(s): SUMITOMO METAL IND LTD
[News, Profiles, Stocks and More about this company](#)

Issued/Exam Date: June 3, 1994 / Nov. 19, 1992

Applicant's Number: JP1992000003103

IPC Class: C01B 3/10;

WCA Class: C01B3/10;

Abstract: **Purpose:** To effectively generate hydrogen and utilize used scraps as a raw material for steel manufacturing by separately introducing oxygen gas from specific positions between respective introduction positions of a gas containing steam and oxygen and an iron-based raw material capable of catalytically reacting in a countercurrent state.
Constitution: An iron-based raw material (e.g. scrap) 12 housed in a hopper 10 is continuously fed from the top into a reactional column 14. On the other hand, oxygen gas 13 is fed from the middle part of the reactional column 14 and heat is generated while oxidizing the charged iron-based raw material to keep the whole at a prescribed temperature. A gas 15 containing steam and oxygen gas is fed from the bottom of the reactional column 14 and made to react with the iron-based raw material to generate hydrogen gas. The oxygen gas 13 is charged at a position (10) within the range of $\pm 0.5L$ when the distance between the charging position of the iron-based raw material and the charging position of the gas containing the steam and oxygen is L. The ratio of the quantity of the oxygen charged together with the steam to the charged quantity of the oxygen is (1-5):1. The generated hydrogen gas (H₂/H₂O-based mixed gas) 16 is led to a separating column 20 to separate and recover the hydrogen gas by cooling the steam.
COPYRIGHT: (C)1994,JPO&Japio

CLASSIFICATION: CHEMABS 121(10)112678A CHEMABS 121(10)112678A DERABS C1994-221531 DERABS C1994-221531 JAPABS 180482C000033 JAPABS 180482C000033

Patents Reference: (No patents reference this one)

Powered by DB2 and Net Data

Nominate this invention for the Gallery...

Alternative Searches

[Patent Number](#) [Boolean Text](#) [Advanced Text](#)

Browse

[U.S. Class by title](#) [U.S. Class by number](#) **TDB** IBM Technical Disclosure Bulletin

[Privacy](#) | [Legal](#) | [Gallery](#) | [IP Pages](#) | [Advertising](#) | [FAQ](#) | [Contact Us](#)